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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
YOUNG, MICAH PAUL

ART UNIT	PAPER NUMBER
1615	

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/072,493	Applicant(s) PENA ET AL.	
	Examiner Micah-Paul Young	Art Unit 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 7 – 9, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Maillard (USPN 3,721,675). The claims are drawn to a pharmaceutical composition comprising an oxazolidinone antibacterial agent dispersed in a lipophilic carrier with specific concentrations of the active agent in the suppository. The claims also recite that the oxazolidinone is effective against gram-positive bacteria.

Maillard teaches a suppository composition comprising an oxazolidinone antibacterial agent and lipophilic carrier. The reference teaches the concentrations of the claimed invention as well (Example 21). These disclosures render the claimed invention anticipated.

3. Claims 1, 4, 8 – 10 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Borgulya et al (USPN 5,574,055). The claims are drawn to a pharmaceutical composition comprising an oxazolidinone antibacterial agent dispersed in a lipophilic carrier with specific concentrations of the active agent in the suppository.

Borgulya et al teaches a pharmaceutical composition comprising an oxazolidinone antibacterial agent carried by a lipophilic agent. The dosage form is a suppository and the

reference discloses the dosage weights and concentrations of the claimed invention (col. 10, lin. 59 – 61; Example 105, A). These disclosures render the claimed invention anticipated.

4. Claims 1, 4, 5 and 10 – 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaplan et al (USPN 4,727,070). The claims are drawn to suppository composition comprising an oxazolidinone antibacterial agent dispersed in a lipophilic carrier, which is recited to be a hard fat. The hard fat is recited to be in specific beat and alpha polymorphic flow temperature.

Kaplan et al teaches a suppository dosage form comprising an oxazolidinone agent and a hard fat as a carrier. The hard fat for the suppository form is disclosed as Witepsol H-15 (col. 4, lin. 18 – 21; Example 7). Applicant has sited Witepsol H-15 series as being the preferred suppository base for the claimed invention. Therefore these disclosures render the claimed invention anticipated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1- 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maillard et al (USPN 3,721,675), Borgulya et al (USPN 5,574,055), and Kaplan et al (USPN 4,727,070) all in view of Barbachyn et al (USPN 5,688,792), **Linezolid** (*Drugs of the Future* **1996**, 21 (1): 1116 – 1123, XP 000654643), and Miyauchi (USPN 4,900,730).

Claims 1 – 20 are drawn to a pharmaceutical dosage form comprising an oxazolidinone antibacterial agent, a lipophilic carrier that is solid at room temperature and another antibacterial agent. Applicant recites a specific formulation for the oxazolidinone compound, and further recites that the accompanying compounds should also be effective against gram-negative bacteria. The claims further recite a particular particle size and active agent concentration as a preferred embodiment of the claimed invention. Claims 21 – 29 are drawn to a method of treating or preventing a gram-positive infection comprising administering the suppository of claims 1 – 20 rectally.

As previously discussed Maillard, Borgulya and Kaplan anticipate many essential elements of the claimed invention. Maillard and Borgulya disclose oxazolidinone antibacterial agent compound comprising a lipophilic in suppository form. Kaplan further discloses an oxazolidinone suppository composition where the lipophilic carrier is the hard fat Witepsol H-15. The references however do not disclose the specific oxazolidinone formulation as recited by claims 2 and 18, and are silent to the particle size of the antibacterial agent. Though well known in the art, the references are silent to the treatment of gram-positive bacterial infections. They do

however disclose the treatment of bacterial infections rectally (Kaplan). The references are also silent to the bioavailability of the dosage forms.

With regard to the specific compound chosen for this invention it is the position of the examiner that the limitations of claims 2, 17 and 18 are merely the selection of equivalent species, and do not impart patentability upon the claimed invention. Oxazolidinone antibacterial compounds are well known in the art, as seen by the references cited, and by Barbachyn and the **Linezolid** references.

Barbachyn discloses the specific formulation of claim 2. The reference discloses that the compound is effective against gram-positive bacterial infections (Abstract), and can be made into dosage form ranging from capsules, tablets to suppositories (col. 6, lin. 49 – 55). The reference discloses that the active component will range between 0.5% to 90% be weight of the composition in the final dosage form (col. 6, lin. 9 – 11).

The **Linezolid** reference discloses a general formulation of the claimed invention. The reference further discloses that the compound is effective against gram-positive and negative bacteria (Table II – IV). The reference further discloses the bioavailability and other pharmacokinetics of the compound is approximately 28% (pg. 1121).

With regard the to the particle size of the compound, the combination of micronized antibacterial agents, lipophilic carriers in a rectal suppository is well known in the art. Miyauchi discloses a rectal suppository where the active antibacterial agents (which are effective against gram-positive bacterial infections) are micronized from 1 – 50 microns, and dissolved in the hard fat Witepsol H-15 (col. 5 – 24 – 64; Examples). Though the particles of the reference fall within

a wide range, the micronizing of particles is well within the level of one of ordinary skill in the art.

The claims also recite that a further antibacterial agent is additionally included in the dosage form that also is effective against gram-positive bacterial infections. Though not explicitly taught by the cited references, it is obvious to combine like compounds. It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in the prior art. *See* In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). It would have been obvious to combine any of the composition well known in the art to be affective against gram-positive bacterial infections (those taught by Miyauchi for instance), with any of the oxazolidinone compounds of the other cited reference.

With this in mind a skilled artisan would have been motivated to combine the teachings and suggestions of the art. A skilled artisan would be motivated to include the compounds of Barbachyn and **Linezolid** into any of the compositions of Maillard or Borgulya. A skilled artisan would have included the hard fat of Kaplan. The skilled artisan would have followed the knowledge of micronizing antibacterial agents and combining them with hard fats into rectal suppositories shown in Miyauchi. It also would have been obvious to the artisan to include other antibacterial agents in order to increase the bacterial infection fighting power of the compound. This combination of teachings, compositions and suggestions would result in a rectal suppository comprising a hard fat (Witepsol W or H series), an oxazolidinone (linezolid or a compound of Barbachyn) compound, and a further antibacterial agent, all of which would be effective in

treating or preventing bacterial infections resulting from gram-positive bacteria. A skilled artisan would be motivated to combine these teachings in order to provide a stable composition with effective pharmacokinetics to treat infection. A skilled artisan also would have been motivated by the antibacterial properties of the oxazolidinone compound to use this compound in a method to treat infections rectally including the compound of Barbachyn. It would have been obvious to combine the teachings, and suggestions as described here, at the time of the invention, with an expected result of a rectal suppository effective in treating bacterial infection.

Correspondence

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Micah-Paul Young whose telephone number is 703-308-7005. The examiner can normally be reached on M-F 7:30am-4: 30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on 703-308-2927. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7648 for regular communications and 703-746-7648 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Micah-Paul Young
Examiner
Art Unit 1615

M. Young
December 11, 2002

Gollamudi S. Kishore, PhD
Primary Examiner
Group 1500